

CLAIMS:

1. A spectrophotometric measuring cell, useful for automated reagent mixing and for handsfree physical cleansing comprising;
 - a. a measuring cell having a free fluid passageway throughout its inner bore from an inlet to an outlet, comprising a light-transparent measuring tube characterize by a longitudinal axis a , and a inner bore of a diameter b ,
 - b. a shaker, accommodated in said tube'd inner bore; having means to strike back and forth along the axis a , comprising a brush of an outer diameter b , said brush is adapted to provide an effective physical cleansing of the inner wall of the cell at the time the shaker is moving along its course;
 - c. actuator, located outside the said tube, adapted to reversibly actuate said shaker to a predetermined rate and course;wherein fluids and/or reagents filling the measuring tube are effectively mixed by means of at least one of the shaker's strikes to obtain a homogenized solution and wherein a necessity of manually cleansing routine is thus avoided.
2. The assembly according to claim 1, wherein the spectrophotometric measuring cell comprising a detector having means to measure either monochromatic wavelength or a multi-channel RGB light emission of a broad spectra range.
3. The assembly according to claim 1, wherein the measuring tube is made of a light transparent glass, quartz or polymer.
4. The assembly according to claim 1, wherein the shaker is made at least in its portion of stainless steel.
5. The assembly according to claim 1, wherein the brush is made of nylon fibers.
6. The assembly according to claim 1, wherein the actuator is at least one electromagnetic coil, adapted to actuate the shaker magnetically.
7. The assembly according to claim 1, comprising at least two electromagnetic actuators, at least one adapted to move the shaker upwards, and at least one adapted to move the shaker downwards.

8. A measuring cell as defined in claim 1 or in any of the preceding claims useful for water systems, selected from swimming pools, water treatment facilities, sewage treatment plants, drinking water systems, cooling towers, or any on-line measurement of water.
9. The measuring cell according to claim 8, especially useful for swimming pools, having means to measure parameters selected from pH, Redox, free chlorine content, light scattering, turbidity and temperature.
10. A method for automatically mixing of fluids and/or reagents and for handsfree physical cleansing of the inner core of spectrophotometric measuring cells, comprising;
 - a. filling the measurement cell with fluids;
 - b. striking the shaker at least one time, so the brush is physically cleansing the inner wall of the measuring tube;
 - c. calibrating for zero reading;
 - d. flashing the measurement cell with fresh fluids;
 - e. sealing the cell's outlets;
 - f. filling sampled fluids and/or reagents utilized for a photochemical reaction so a non-homogenized admixture is obtained;
 - g. striking the shaker a plurality of times so a homogenized solution is obtained and so bubbles of entrapped air or gas are purged from the cell;
 - h. measuring a predetermined spectrum of the solution;
 - i. opening the cell's outlets and flashing the colored fluids out of the cell by means of fresh fluid.